

REMARKS

Claims 1-10 are pending in the present application. The Office Action and cited reference have been considered.

Claims 1-10 were rejected under 35 U.S.C. §103(a) as being unpatentable over Saurel et al (U.S. Pat 5,123,418) in view of Mayol et al. (U.S. Pat 5,357,963) and further in view of Pourcelot et al (U.S. Pat 4,605,009)

Claim rejections — 35 USC §103

As per claim 1.

Claim 1 of the present patent application claims "an echographic probe with sector scanning comprising a tubular body at least partly housed in its front end, a transducer designed to emit an incident ultrasonic wave focused towards the structures to be examined and to receive ultrasonic waves generated by these structures under the effect of this incident wave, this transducer being rotatably mounted inside the probe around an axis of rotation and being coupled with actuating means so as to be able to perform displacements at least partly in rotation relatively to the probe in order to obtain a sector scan of the structure to be examined, wherein the transducer comprise a piezoelectric assembly having power for focusing the emitted beams and adjacent to this assembly, a layer made in a material providing good transmission of ultrasonic waves, this layer having, opposite to said piezoelectric component, a convex axisymmetric outer surface, the generatrix of which has a curved shape and the director axis of which corresponds to the axis of rotation of the transducer so as to be able to come contact with the structure to be examined."

Saurel et al discloses an echographic probe with sector scanning comprising, a transducer designed to emit an incident ultrasonic wave focused

towards the structures to be examined and to receive ultrasonic waves generated by these structures under the effect of this incident wave, a layer made in a material providing good transmission of ultrasonic waves, this layer having, opposite to said piezoelectric component, a convex axisymmetric outer surface, the generatrix of which has a curved shape so as to be able to come into contact with the structure to be examined (claim 1).

Then the probe in Saurel et al doesn't have:

- a tubular body at least partly housing the transducer in its front end,
- this transducer being rotatably mounted inside the probe around an axis of rotation and being coupled with actuating means so as to be able to perform displacements at least partly in rotation relatively to the probe in order to obtain a sector scan of the structure to be examined, wherein the transducer comprises a piezoelectric assembly having power for focusing the emitted beams and adjacent to this assembly, and,
- a director axis of the outer surface corresponding to the axis of rotation of the transducer.

Mayol et al discloses an echographic probe having a tubular body at least partly housing the transducer in its front end, this transducer being rotatably mounted inside the probe around an axis of rotation and being coupled with actuating means so as to be able to perform displacements at least partly in rotation relatively to the probe in order to obtain a sector scan of the structure to be examined, wherein the transducer comprises a piezoelectric assembly having power for focusing the emitted beams and adjacent to this assembly.

Mayol et al doesn't teach, with respect to the probe, a director axis of a convex outer surface corresponding to the axis of rotation of the transducer.

In Saurel, in figures 1 the center of curvature of the tip is positioned between the transducer and the tip but the center of curvature of the transducer is beyond the tip as seen from the transducer. Then Saurel doesn't teach a director axis, of an outer surface, corresponding to the axis of the transducer.

Pourcelot also does not teach a director axis, of an outer surface, corresponding to the axis of rotation of the transducer, as there isn't any axis of rotation for the transducers.

Furthermore, the probe proposed by Pourcelot comprises a plurality of piezoelectric elements, which is contradictory with the teaching of Saurel.

Moreover, it is a goal of Pourcelot to suppress mobile parts in a probe. If one skilled in the art were led to follow this teaching, it will distance his probe from the one according to the invention.

Thus, one skilled in the art, confronted by the documents Mayol, Saurel and Pourcelot, would have to make numerous non-obvious choices, among which:

- the curvature of the tip of the probe,
- the number of transducers,
- the mobility of the transducer(s)
- an eventual axis of curvature of the tip, and,
- the position of this axis.

Nevertheless, it will be understood that one skilled in the art of ultrasound probe wouldn't have used the teaching of Pourcelot to improve a probe usable in ophthalmology.

Thus, claim 1 cannot properly be considered to be suggested by, and hence obvious from, Saurel in view of Mayol and further in view of Pourcelot.

As for claims 2 to 10, they depend from claim 1 and should be considered allowable along therewith.

Then none of claims 2 to 10 can be anticipated by Saurel in view of Mayol and further in view of Pourcelot.

In view of the above remarks, Applicant respectfully requests reconsideration and withdrawal of the outstanding rejections of record. Applicant submits that the application is in condition for allowance and early notice to this effect is most earnestly solicited.

Respectfully submitted,

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